

In The Claims

Please amend the claims as follows:

1 – 8. (Cancelled)

9. (Previously amended) An apparatus as claimed in Claim 29, wherein the disengageable connector couples together the proximal and distal components so that one is in a fixed angle relation to the other in said normal use, but with freedom to articulate away from the fixed angle relation when, in use, a bending force is applied to the prosthetic limb only when the force exceeds said threshold level.

10. (Previously presented) An apparatus as claimed in Claim 9, wherein the apparatus with disengageable connector has a resilient biasing means whereby the disengageable connector is resiliently biased to the coupled state and whereof the biasing force applied to the disengageable connector by the resilient biasing means in use determines the threshold level of bending force on the prosthetic limb that will cause disengagement of the disengageable connector.

11. (Original) An apparatus as claimed in Claim 10, wherein the disengageable connector comprises a pin mounted to one of the proximal and distal components and co-operating with a socket in the other of the proximal and distal components.

12. (Original) An apparatus as claimed in Claim 11, wherein the pin is mounted to be movable back and forth axially of the component to which it is mounted and is biased forwardly.

13. (Original) An apparatus as claimed in Claim 11, wherein the pin has a pointed or domed tip and the socket is of a corresponding concave shape whereby a bending force applied to the prosthetic limb in use will cause the tip of the pin to ride outwardly up the socket wall.

14. (Previously presented) An apparatus as claimed in Claim 13, wherein the shape of the tip is domed or substantially conical to facilitate disengagement of the disengageable connector from whichever radial orientation the bending force is applied.

15. (Original) An apparatus as claimed in Claim 9, wherein the disengageable connector is configured to allow gyrating articulation or universal articulation, substantially in the manner of a ball joint, when it disengages.

16. (Original) An apparatus as claimed in Claim 9, wherein the disengageable connector comprises a T-shaped formation at the end of one or both of the proximal and distal components that are adjacent each other, the head of the or each T-shaped formation being curved/ arcuate to facilitate tilting of one component relative to the other.

17. (Previously amended) An apparatus as claimed in Claim 16, including a coupling body, wherein the T-shaped formations are accommodated in the coupling body, or a further coupling body, to tilt within the coupling body.

18. (Original) An apparatus as claimed in Claim 17, wherein the coupling body has slots therethrough, through each of which a respective end of a head of a T-shaped formation extends and whereby the end may protrude to a greater or lesser extent as the component tilts, whereby the coupling body provides a captive articulated joint with a restricted degree of tilting freedom of movement.

19. (Original) An apparatus as claimed in Claim 17, wherein one T-shaped formation is oriented in the coupling body with its head substantially orthogonal to the head of the other, whereby through tilting of each relative to the other an approximately universal or gyrating articulation may be achieved.

20 - 21. (Cancelled)

22. (Previously amended) A failsafe apparatus for attaching a prosthetic limb a transcutaneous bone implant attached through the skin directly to the bone of a patient, wherein a

bending force may be applied to the limb urging the limb toward a tilting articulation, the apparatus to failsafe if excess force is applied to the limb, comprising:

- a proximal component to mount to a bone implant;
- a distal component to mount to a prosthetic limb; and
- a coupling body coupling together the proximal and distal components with freedom to articulate when, in use, a said bending force is applied to the prosthetic limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by tilting articulation within the apparatus, wherein the coupling body has an automatically disengageable connector that applies a biasing force to hold the proximal and distal components in engagement and thereby couples together the proximal and distal components so that one is in a fixed angle relation to the other in normal use, the effect of the biasing force being opposed by any applied bending force, thereby allowing the proximal and distal components to disengage with freedom to tilt away from the fixed angle relation when, in use, a bending force is applied to the prosthetic limb only when the applied bending force exceeds the predetermined threshold level.

23. (Cancelled)

24. (Previously amended) A failsafe apparatus for attaching a prosthetic limb to a transcutaneous bone implant attached through the skin directly to the bone of a patient to failsafe if excess force is applied to the limb, the failsafe apparatus comprising:

- a proximal component to mount to a bone implant ;
- a distal component to mount to a prosthetic limb ;
- a coupling body coupling together the proximal and distal components with freedom to articulate when, in use, at least one of a bending and torsional force is applied to the prosthetic

limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by at least one of tilting and rotational articulation within the attachment apparatus, the apparatus having a screw adjustment whereby the threshold safe level of force on the prosthetic limb that will cause said at least one of tilting and rotational articulation within the attachment apparatus may be increased or decreased.

25. (Previously amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient to failsafe if excess force is applied to the limb, the failsafe apparatus comprising:

- a proximal component to mount to a bone implant ;

- a distal component to mount to a prosthetic limb ;

- a coupling body coupling together the proximal and distal components; and

resilient biasing means whereby the proximal and distal components are biased in a fixed configuration in which the proximal and distal components are in a fixed angle and rotational relation to the one another, the proximal and distal components having freedom to articulate from the fixed configuration when, in use, at least one of a bending and or torsional force is applied to the prosthetic limb only when the force exceeds a predetermined threshold safe level whereby the force is accommodated by at least one of bending and rotational articulation within the attachment apparatus, and wherein the biasing force applied by the resilient biasing means in use determines the threshold safe level of force on the prosthetic limb that will cause said at least one of bending and rotational articulation within the attachment apparatus, the apparatus having adjustment means for adjusting the biasing force and hence adjusting the threshold safe level of

force on the prosthetic limb that will cause said at least one of bending and rotational articulation within the attachment apparatus.

26. (Previously amended) A failsafe apparatus as described in claim 25, wherein the resilient biasing means includes means for applying a first biasing force which biases the proximal and distal components in a fixed angle relation to one another and means for applying a second biasing force which biases the components in a fixed rotational relation. .

27. (Previously amended) A failsafe apparatus for attaching a prosthetic limb to the bone of a patient, wherein a force may be applied to the limb urging the limb toward bending or rotational articulation, the failsafe apparatus comprising:

- a proximal component to mount to a bone implant ;
- a distal component to mount to a prosthetic limb ;
- a coupling body coupling the proximal and distal components moveably with respect to each other in bending and axial rotational articulation around an axis of the limb, said coupling body including

- a resilient biasing means for applying a predetermined biasing force holding the components in a fixed relationship to each other for normal use of the prosthetic limb, the effect of said biasing force being opposed by any said force applied to the limb urging the limb toward said at least one bending or rotational articulation, and only when said force applied to the limb exceeds a predetermined threshold safe level and thereby becomes sufficient to overcome the effect of the biasing force, the resilient biasing means allows the components automatically to move in said at least one bending or axial rotational

articulation, thereby providing failsafe protection of the limb from excessive force applied to the limb, said resilient biasing means including

a clutch-like mechanism having opposing sets of co-operating clutch teeth wherein the teeth are substantially symmetrical in profile whereby the clutch-like mechanism may be disengaged in either rotational direction of torque, clock-wise or anti-clockwise, applied to the prosthetic limb and

a pin mounted to one of the proximal and distal components and co-operating with a socket of a corresponding concave shape in the other of the proximal and distal components, whereby a bending force applied to the prosthetic limb in use will cause the tip of the pin to ride outwardly up the socket wall in the direction controlled by the bending force.

28. (Previously amended) A failsafe apparatus for attaching a prosthetic limb to a transcutaneous bone implant attached through the skin directly to the bone of a patient, wherein a force may be applied to the limb urging the limb toward tilting and/or rotational articulation, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ;

a coupling body coupling the proximal and distal components moveably with respect to each other in a tilting and an axial rotational articulation, said coupling body including

a mechanism for holding said proximal and distal components in relation to each other so that the components can be engaged and can be disengaged, wherein when the

components are engaged, one component is in a fixed relation to the other, preventing said tilting and axial rotation, and wherein when the components are disengaged, said tilting and/or axial rotation is allowed, said coupling body including

a resilient biasing means for applying a biasing force holding one of the components engaged with the other component for normal use of the prosthetic limb subject to an applied force less than a predetermined threshold safe level, the effect of said biasing force being opposed by any said force applied to the limb urging the limb toward said tilting and/or rotational articulation, and only when said force applied to the limb exceeds a said threshold safe level and thereby becomes sufficient to overcome the effect of the biasing force, the resilient biasing means allows the components automatically to become disengaged and thereby to move in said tilting and/or axial rotational articulation, thereby providing failsafe protection of the limb from excessive force applied to the limb.

29. (Previously presented) A failsafe apparatus for attaching a prosthetic limb to a transcutaneous bone implant attached through the skin directly to the bone of a patient, wherein forces of various levels may be applied to the limb, including a bending force urging the limb toward tilting, the failsafe apparatus comprising:

a proximal component to mount to a bone implant ;

a distal component to mount to a prosthetic limb ; and

a disengageable connector for coupling the proximal and distal components and for preventing said bending force at a level greater than a predetermined threshold safe level from being transmitted by the limb to the bone implant, including

resilient means for (a) coupling and holding the components in a fixed angle relationship to each other for normal use of the prosthetic limb when the limb is subject to an applied bending force less than said predetermined threshold safe level, the effect of the resilient means in holding the components in fixed relationship to each other being opposed by any said applied bending force, and (b) disengaging the disengageable connector automatically only when the bending force is greater than said predetermined threshold safe level, thereby being sufficient to overcome the maximum effect of the resilient means, and by disengagement for permitting tilting of the components away from said fixed angel relationship for a level of bending force greater than said predetermined threshold safe level,

thereby providing failsafe protection of the bone implant from the effect of said bending force at a level greater that said predetermined threshold safe level.